09/709,581

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

```
 NEWS  1          Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2          "Ask CAS" for self-help around the clock
 NEWS  3  Feb 24  PCTGEN now available on STN
 NEWS  4  Feb 24  TEMA now available on STN
 NEWS  5  Feb 26  NTIS now allows simultaneous left and right truncation
 NEWS  6  Feb 26  PCTFULL now contains images
 NEWS  7  Mar 04  SDI PACKAGE for monthly delivery of multifile SDI results
 NEWS  8  Mar 24  PATDPAFULL now available on STN
 NEWS  9  Mar 24  Additional information for trade-named substances without
                  structures available in REGISTRY
 NEWS 10  Apr 11  Display formats in DGENE enhanced
 NEWS 11  Apr 14  MEDLINE Reload
 NEWS 12  Apr 17  Polymer searching in REGISTRY enhanced
 NEWS 13  Jun 13  Indexing from 1947 to 1956 added to records in CA/CAPLUS
 NEWS 14  Apr 21  New current-awareness alert (SDI) frequency in
                  WPIDS/WPINDEX/WPIX
 NEWS 15  Apr 28  RDISCLOSURE now available on STN
 NEWS 16  May 05  Pharmacokinetic information and systematic chemical names
                  added to PHAR
 NEWS 17  May 15  MEDLINE file segment of TOXCENTER reloaded
 NEWS 18  May 15  Supporter information for ENCOMPPAT and ENCOMPLIT updated
 NEWS 19  May 19  Simultaneous left and right truncation added to WSCA
 NEWS 20  May 19  RAPRA enhanced with new search field, simultaneous left and
                  right truncation
 NEWS 21  Jun 06  Simultaneous left and right truncation added to CBNB
 NEWS 22  Jun 06  PASCAL enhanced with additional data
 NEWS 23  Jun 20  2003 edition of the FSTA Thesaurus is now available
 NEWS 24  Jun 25  HSDB has been reloaded
 NEWS 25  Jul 16  Data from 1960-1976 added to RDISCLOSURE
 NEWS 26  Jul 21  Identification of STN records implemented
 NEWS 27  Jul 21  Polymer class term count added to REGISTRY

 NEWS EXPRESS  April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
               MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 08:30:24 ON 22 JUL 2003

=> file caplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
```

```
                                                        ENTRY     SESSION
FULL ESTIMATED COST                                      0.42        0.42

FILE 'CAPLUS' ENTERED AT 08:31:28 ON 22 JUL 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)
```



```
FILE COVERS 1907 - 22 Jul 2003  VOL 139 ISS 4
FILE LAST UPDATED: 21 Jul 2003  (20030721/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s reverse flow coaxial turbines
        167860 REVERSE
          6937 REVERSES
        174118 REVERSE
                 (REVERSE OR REVERSES)
        705519 FLOW
         69954 FLOWS
        735887 FLOW
                 (FLOW OR FLOWS)
         13096 COAXIAL
             2 COAXIALS
         13098 COAXIAL
                 (COAXIAL OR COAXIALS)
         21746 TURBINES
L1           0 REVERSE FLOW COAXIAL TURBINES
                 (REVERSE(W)FLOW(W)COAXIAL(W)TURBINES)

=> s reverse (P)flow (P) coaxial (P)turbines
        167860 REVERSE
          6937 REVERSES
        174118 REVERSE
                 (REVERSE OR REVERSES)
        705519 FLOW
         69954 FLOWS
        735887 FLOW
                 (FLOW OR FLOWS)
         13096 COAXIAL
             2 COAXIALS
         13098 COAXIAL
                 (COAXIAL OR COAXIALS)
         21746 TURBINES
L2           0 REVERSE (P)FLOW (P) COAXIAL (P)TURBINES

=> s reverse (P)flow (P) coaxial
        167860 REVERSE
          6937 REVERSES
```

```
        174118 REVERSE
                 (REVERSE OR REVERSES)
        705519 FLOW
         69954 FLOWS
        735887 FLOW
                 (FLOW OR FLOWS)
         13096 COAXIAL
             2 COAXIALS
         13098 COAXIAL
                 (COAXIAL OR COAXIALS)
L3          26 REVERSE (P)FLOW (P) COAXIAL

=> d l3 1-26 ti

L3   ANSWER 1 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Curvilinear separator for phase separation of immiscible liquids and
     gases, especially petroleum dewatering

L3   ANSWER 2 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Particle behaviors in a pulverized coal-fired sudden-expansion combustor
     with coaxial jets

L3   ANSWER 3 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Numerical simulation of oscillatory Marangoni convective flow inside a
     cylindrical liquid zone

L3   ANSWER 4 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Reverse flow pressure limiting aperture

L3   ANSWER 5 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Numerical study of swirl properties of rotating conical channel with axial
     flow

L3   ANSWER 6 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   History of diffusion batteries in aerosol measurements

L3   ANSWER 7 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Apparatus for preventing scale formation in water systems

L3   ANSWER 8 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Effects of shear flow on photosynthesis in a dilute suspension of
     microalgae

L3   ANSWER 9 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Generation of pseudotachylite under granulite-facies conditions, and its
     preservation during cooling

L3   ANSWER 10 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Experimental study of turbulent diffusion flames stabilized on a bluff
     body.  1.  Flame structure

L3   ANSWER 11 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Radial, turbulent flow of a fluid between two coaxial disks

L3   ANSWER 12 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   An investigation on a round jet discharged into a coaxial dead-end pipe

L3   ANSWER 13 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Fluidized-bed coal-devolatilization reactor with a submerged heat
     exchanger

L3   ANSWER 14 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
```

```
TI   Effect of different factors on rheological behavior of destroyed
     macromolecular gels

L3   ANSWER 15 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Flow characteristics of swirling coaxial jets from divergent nozzles

L3   ANSWER 16 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Fluid-dynamic effects, including turbulence, on a high-pressure discharge

L3   ANSWER 17 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Apparatus for growing crystals from solution

L3   ANSWER 18 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Aerodynamic studies on swirled coaxial jets from nozzles with divergent
     quarls

L3   ANSWER 19 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Cold trap for purification of liquid sodium

L3   ANSWER 20 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Parameters of a plasma pinch obtained from a coaxial source in relation to
     the sign of central electrode potential

L3   ANSWER 21 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Rate of increase in arc radius for high current arcs in nitrogen and
     sulfur hexafluoride

L3   ANSWER 22 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Aerodynamic studies carried out on turbulent jets by the International
     Flame Research Foundation

L3   ANSWER 23 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Through-flow filters

L3   ANSWER 24 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Flow of some liquid polar dielectrics in an inhomogeneous electric field

L3   ANSWER 25 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Apparatus for wet purification and cooling of hot gases

L3   ANSWER 26 OF 26  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Low-cost oxygen for metallurgical purposes


=> s l3 and (emulsion or microemulsion)
        176565 EMULSION
        107564 EMULSIONS
        214197 EMULSION
                  (EMULSION OR EMULSIONS)
          9325 MICROEMULSION
          7760 MICROEMULSIONS
         10690 MICROEMULSION
                  (MICROEMULSION OR MICROEMULSIONS)
L4           0 L3 AND (EMULSION OR MICROEMULSION)

=> s l3 and water
       2042195 WATER
        227247 WATERS
       2093165 WATER
                  (WATER OR WATERS)
L5           1 L3 AND WATER
```

```
=> d l5 all

L5   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS on STN
Full Text
AN   1997:682637  CAPLUS
DN   127:322637
TI   Apparatus for preventing scale formation in water systems
PA   Gauger, Raymond G., USA
SO   Israeli, 20 pp.
     CODEN: ISXXAQ
DT   Patent
LA   English
IC   ICM  E03C001-24
     ICS  E03C001-28; E03C001-04; E03C001-042; C23F013-00
CC   61-8 (Water)
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   IL 103662          A1   19970713       IL 1992-103662   19921105
PRAI IL 1992-103662          19921105
AB   The app. includes a housing configured for connection in fluid flow with
     the system and having an inner chamber with a generally cylindrical
     surface and an entrance end opening and an exit end opening, diams. of the
     openings being less than the diam. of the inner chamber; flow control
     rib means formed on the inner surface; a longitudinally extending unitary
     imperforate generally metallic member having a turbulence creating surface
     and diam. less than the diam. of the inner chamber and greater than the
     diam. of the openings; means for supporting the unitary member in the
     chamber in coaxial alignment with the inner surface and spaced from the
     entrance and exit openings; and fluid feedback means formed within the
     chamber adjacent at least one of the exit opening or the entrance opening
     for causing fluid flowing through the conduit to at least partially
     reverse itself for causing greater turbulence than that caused by the
     rib means and the surface of the unitary member to thereby prevent the
     formation scale in the fluid delivery system.
ST   water purifn scale control app
IT   Scale (deposits)
        (control; app. for preventing scale formation in water
        systems)
IT   197724-61-1
     RL: DEV (Device component use); USES (Uses)
        (app. for preventing scale formation in water systems)


=> d his

     (FILE 'HOME' ENTERED AT 08:30:24 ON 22 JUL 2003)

     FILE 'CAPLUS' ENTERED AT 08:31:28 ON 22 JUL 2003
L1            0 S REVERSE FLOW COAXIAL TURBINES
L2            0 S REVERSE (P)FLOW (P) COAXIAL (P)TURBINES
L3           26 S REVERSE (P)FLOW (P) COAXIAL
L4            0 S L3 AND (EMULSION OR MICROEMULSION)
L5            1 S L3 AND WATER

=> s reverse flow coaxial
        167860 REVERSE
          6937 REVERSES
        174118 REVERSE
                  (REVERSE OR REVERSES)
        705519 FLOW
         69954 FLOWS
```

```
        735887 FLOW
                  (FLOW OR FLOWS)
         13096 COAXIAL
             2 COAXIALS
         13098 COAXIAL
                  (COAXIAL OR COAXIALS)
L6           0 REVERSE FLOW COAXIAL
                  (REVERSE(W)FLOW(W)COAXIAL)

=> s reverse flow
        167860 REVERSE
          6937 REVERSES
        174118 REVERSE
                  (REVERSE OR REVERSES)
        705519 FLOW
         69954 FLOWS
        735887 FLOW
                  (FLOW OR FLOWS)
L7        1280 REVERSE FLOW
                  (REVERSE(W)FLOW)

=> s l7 and (emulsion or microemulsion)
        176565 EMULSION
        107564 EMULSIONS
        214197 EMULSION
                  (EMULSION OR EMULSIONS)
          9325 MICROEMULSION
          7760 MICROEMULSIONS
         10690 MICROEMULSION
                  (MICROEMULSION OR MICROEMULSIONS)
L8          10 L7 AND (EMULSION OR MICROEMULSION)

=> d l8 1-10 ti

L8   ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Ball-point pens for writing on cloth

L8   ANSWER 2 OF 10  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Quick inverting liquid flocculant

L8   ANSWER 3 OF 10  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Effects of backflushing conditions on permeate flux in membrane crossflow
     microfiltration of oil emulsion

L8   ANSWER 4 OF 10  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Fibrous liquid absorbents from hydrophilic nonwoven fabric laminates
     having a hydrophobic fiber fluff layer with good resistance to reverse
     flow of liquids and causing no skin rash on contacting the laminates
     with bodies

L8   ANSWER 5 OF 10  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   'In vitro' cholesteryl ester bidirectional flow between high-density
     lipoproteins and triglyceride-rich emulsions: effects of particle
     concentration and composition, cholesteryl ester transfer activity and
     oleic acid

L8   ANSWER 6 OF 10  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Reverse flow of gas in fluidized beds

L8   ANSWER 7 OF 10  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   Extruders for separation of polymers or rubbers from emulsions
```

L8 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
TI Behavior of bubbles and circulating flow of the **emulsion** phase in a 60 cm-diameter fluidized catalyst bed

L8 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
TI Distribution of partial oxygen pressure along the multiphase blast flow of an oxygen converter

L8 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
TI Hydraulic fracturing process using **reverse flow**

=> d l8 3 8 10 all

L8 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
Full Text
AN 2000:85581 CAPLUS
DN 132:97398
TI Effects of backflushing conditions on permeate flux in membrane crossflow microfiltration of oil **emulsion**
AU Cakl, J.; Bauer, I.; Dolecek, P.; Mikulasek, P.
CS Department of Chemical Engineering, University of Pardubice, Pardubice, 532 10, Czech Rep.
SO Desalination (2000), 127(2), 189-198
CODEN: DSLNAH; ISSN: 0011-9164
PB Elsevier Science B.V.
DT Journal
LA English
CC 60-3 (Waste Treatment and Disposal)
AB Expts. with oil-in-water **emulsions**, conducted in a lab. crossflow microfiltration unit equipped with backflushed ZrO2 ceramic membranes are discussed. Results demonstrated that membrane backflushing can maintain the permeate flux at a level which is nearly 3-fold more than the long-term flux in the absence of membrane backflushing. It was obsd. that backflushing effects were more pronounced when the back-pulse duration was shorter, transmembrane pressure difference was higher, and retentate velocity was lower in forward filtration. An optimum backflushing frequency which maximized av. permeate flux was 1-50 s, depending on operating conditions. The magnitude of the transmembrane pressure difference in the **reverse flow** had a relatively small effect. An attempt was also made to explain the results in terms of a simple semi-empirical model of the process. Parameters evaluated from dynamic and steady state expts. without membrane backflushing were useful in estg. process performance with membrane backflushing. The effect of backflushing duration and frequency, transmembrane pressure difference, and retentate velocity on av. permeate flux were well predicted using this model.
ST modeling backflushing effect membrane crossflow microfiltration; permeate flux membrane crossflow microfiltration backflushing; oil in water **emulsion** crossflow microfiltration; wastewater treatment microfiltration **emulsion** breaking
IT Wastewater treatment
(**emulsion** breaking; backflush conditions effect on permeate flux and fouling mechanisms of membrane crossflow microfiltration of oil-in-water **emulsions**)
IT Wastewater treatment
(filtration, micro-; membrane crossflow; backflush conditions effect on permeate flux and fouling mechanisms of membrane crossflow microfiltration of oil-in-water **emulsions**)
IT Wastewater treatment
(membrane sepn.; backflush conditions effect on permeate flux and fouling mechanisms of membrane crossflow microfiltration of

oil-in-water **emulsions**)
IT Simulation and Modeling, physicochemical
(modeling backflush conditions effect on permeate flux and fouling mechanisms of membrane crossflow microfiltration of oil-in-water **emulsions**)
IT **Emulsions**
(oil-in-water; backflush conditions effect on permeate flux and fouling mechanisms of membrane crossflow microfiltration of oil-in-water **emulsions**)
IT Membranes, nonbiological
(zirconia ceramic; backflush conditions effect on permeate flux and fouling mechanisms of membrane crossflow microfiltration of oil-in-water **emulsions**)
IT 1314-23-4, Zirconia, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ceramic membranes of; backflush conditions effect on permeate flux and fouling mechanisms of membrane crossflow microfiltration of oil-in-water **emulsions**)
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Belfort, G; J Membr Sci 1994, V96, P1 CAPLUS
(2) Bhave, R; Inorganic membranes: Synthesis, Characteristics and Applications 1991, P95
(3) Cakl, J; Boundary layer phenomena in backflushed crossflow microfiltration. 13th International Congress 1998
(4) Cakl, J; Sep Sci Technol 1995, V30, P3663 CAPLUS
(5) Coulson, J; Chemical Engineering 1977, V1, P35
(6) Galaj, S; Le Lait 1984, V64, P129
(7) Jones, W; J Membr Sci 1999, V157, P199 CAPLUS
(8) Jonsson, G; Proc Workshop on Membrane Technology in Agro Based Industry 1994
(9) Mallubhotla, H; Ind Eng Chem Res 1996, V35, P2920 CAPLUS
(10) Masamuto, K; J Ferment Technol 1988, V66, P199
(11) Mikulasek, P; Collect Czech Chem Commun 1994, V59, P737 CAPLUS
(12) Nystrom, M; Membranes in Bioprocessing -- Theory and Applications 1993, P243 CAPLUS
(13) Redkar, S; AIChE J 1995, V41, P501 CAPLUS
(14) Redkar, S; J Membr Sci 1996, V121, P229 CAPLUS
(15) Roger, V; J Membr Sci 1992, V68, P149
(16) Wilharm, C; J Membr Sci 1996, V21, P217
(17) Xu, Y; Chem Eng J 1995, V57, P247 CAPLUS

L8 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
Full Text
AN 1980:588439 CAPLUS
DN 93:188439
TI Behavior of bubbles and circulating flow of the **emulsion** phase in a 60 cm-diameter fluidized catalyst bed
AU Tsutsui, Toshio; Furusaki, Shintaro; Miyauchi, Terukatsu
CS Dep. Chem. Eng., Univ. Tokyo, 113, Japan
SO Kagaku Kogaku Ronbunshu (1980), 6(5), 501-7
CODEN: KKRBAW; ISSN: 0386-216X
DT Journal
LA Japanese
CC 48-7 (Unit Operations and Processes)
AB The static pressure distribution in the bed was measured and the behavior of bubbles investigated by use of a hot-wire probe. The mean vol.-surface diam. of bubbles was ~1.5 cm. The bubble growth tendency was not clear. The gas vol. transported by small bubbles (0.3-0.7 cm diam.) was the same order of magnitude as that by middle size bubbles (1-2 cm diam.) or by large bubbles (~4 cm diam.). The radial bubble holdup

distribution is rather flat. More bubbles exist near the wall in the region near the distributor, but bubbles show a tendency to assemble to the center as they rise farther from the distributor. Circulating flow exists in the **emulsion** and the vicinity of the top of the dense phase is the zone where the circulating flow **reverses flow** direction. In this zone, bubble holdup is almost const. radially and the longitudinal velocity of the **emulsion** is nearly zero. The height of this zone, which may be called the transition zone, is ~ 15 cm for superficial gas velocity 22 cm/s and ~40 cm for 33 cm/s.

ST fluidized bed bubble circulation; catalyst fluidized bubble circulation

IT Fluidization
(bubble behavior and circulating flow of **emulsion** phase in)

IT Catalysts and Catalysis
(fluidization of, bubble behavior and circulating flow of **emulsion** phase in)

IT Bubbles
(in fluidization)

L8 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
Full Text

AN 1978:549283 CAPLUS

DN 89:149283

TI Hydraulic fracturing process using **reverse flow**

IN Kiel, Othar M.

PA USA

SO Can., 73 pp.
CODEN: CAXXA4

DT Patent

LA English

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 1030869	A1	19780509	CA 1975-240633	19751127
	GB 1460647	A	19770106	GB 1974-46458	19741028
	GB 1493890	A	19771130	GB 1975-44380	19751028
PRAI	US 1975-544411		19750127		
	GB 1974-46458		19741028		

AB A method of well stimulation by hydraulic fracturing, with a plurality of double cycles, is described. Thus, an oil-water **emulsion** fracturing fluid was injected into the formation at ~5000 psi, maintaining this pressure for ≥3 min. Sand is used for preventing fluid loss and as propping agent. The injection is discontinued, allowing ≥1 period of **reverse flow** from the formation for a period sufficiently long (20 s to <10 min) to allow a significant pressure drop in the fluid, with subsequent injection of fracturing fluid into the formation.

ST petroleum well hydraulic fracturing

IT Petroleum wells
(fracturing of, with injection of oil-water **emulsion** and **reverse flow**)

IT Flow
(reverse, in hydraulic fracturing of petroleum wells)

=>